

# WATER QUALITY M E M O R A N D U M

Utah Coal Regulatory Program

---

October 19, 2004

OK

TO: Internal File

THRU: D. Wayne Hedberg, Permit Supervisor *DWH*

FROM: James D. Smith, Senior Reclamation Specialist *DS*

RE: 2004 Second Quarter Water Monitoring, CO-OP Mining Company, Bear Canyon Mine, C/015/0025-WQ04-2, Task # 2012

1. Were data submitted for all of the MRP required sites? YES [X] NO [ ]

*Identify sites not monitored and reason why, if known:*

SBC-11 has not been not accessible since early January 2003 because of a roof fall in the Hiawatha workings of Mine #1. SBC-9A replaced SBC-11 for monitoring water in this section of the #1 Mine; however, additional roof falls made Mine #1, including SBC-9A, inaccessible. The pipe that carries the water out of the mine to the culinary water supply is now the location for water quality and quantity monitoring: SBC-9A has been retained as the name for this sampling site.

2. On what date does the MRP require a five-year resampling of baseline water data.

*See Technical Directive 004 for baseline resampling requirements. Consider the five-year baseline resubmittal when responding to question one above. Indicate if the MRP does not have such a requirement.*

## Resampling Due Date

Renewal submittal due 07/02/00, renewal due 11/02/00. Baseline parameters are to be taken in August of year 5 prior to each permit renewal (Table 7.1-8). Baseline parameters were measured August 2000 and included with the Second Quarter 2000 data submittal. Next baseline analysis will be in August 2005.

3. Were all required parameters reported for each site? YES [X] NO [ ]  
*Comments, including identity of monitoring site:*

SBC-9A: total cations\*, total anions\*, and cation-anion balance were not reported; however, these are not required ground-water parameters under the current MRP

4. Were irregularities found in the data? YES [X] NO [ ]  
*Comments, including identity of monitoring site:*

BC-1 May: Mg (n = 52), Na (n = 52), K (n = 50), sulfate (n = 84), lab specific conductivity (n = 59), TDS (n = 84), and total cations\* (n = 75) were outside the two standard deviation range.

BC-2 June: water temperature (n = 143) was outside the two standard deviation range; it was very high, 28.9<sup>o</sup> C.

BC-3 May and June: flow (n = 118) was outside the two standard deviation range.

SBC-4: bicarbonate (n = 78) was outside the two standard deviation range.

SBC-9A: flow (n = 6) and bicarbonate (n = 6) were outside the two standard deviation range; this water is being sampled at a new location, where the water-supply line leaves the mine.

SBC-14: bicarbonate (n = 26) was outside the two standard deviation range.

SBC-16: flow (n = 14) was outside the two standard deviation range.

SBC-17: Ca (n = 14), Mg (n = 14), Na (n = 14), K (n = 14), bicarbonate (n = 14), Cl (n = 14), sulfate (n = 14), total alkalinity\* (n = 13), total hardness (n = 14), lab specific conductivity (n = 13), TDS (n = 14), total cations\* (n = 11), and total anions\* (n = 11) were outside the two standard deviation range.

SMH-3: field pH (n = 33) was outside the two standard deviation range.

SMH-4: field pH (n = 34) was outside the two standard deviation range.

\* - Not a required parameter

5. Were DMR data submitted for all required sites?

1<sup>st</sup> month, YES [ ] NO [X]  
2<sup>nd</sup> month, YES [ ] NO [X]

Identify sites and months not monitored: 3<sup>rd</sup> month, YES [ ] NO [X]

The data were submitted electronically as operational parameters.

UPDES sites -002, -003, -006, and -007 were dry all quarter, but "no flow" was not submitted to the database for April and May.

6. Were all required DMR parameters reported? YES [ ] NO [X]  
Comments, including identity of monitoring site:

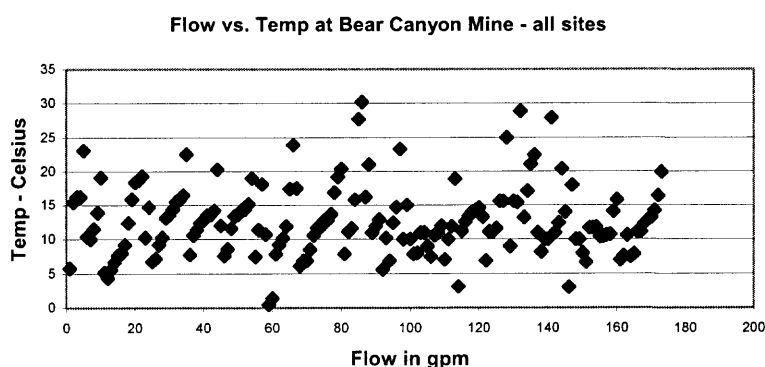
DMR parameters that are not included in the operational parameter lists in the MRP - such as sanitary wastes, visible foam, and floating solids - are not reported in the electronic submittal. Operational monitoring values are reported for flow, TDS, TSS, pH, and total iron.

7. Were irregularities found in the DMR data? YES [X] NO [ ]  
Comments, including identity of monitoring site:

UTG040006-004 April and June: water temperature (n = 242) was outside the two standard deviation range. The April 29 reading of 25<sup>o</sup> C was very high.

8. Based on your review, what further actions, if any, do you recommend?

In the fourth quarter of 2003, four sites had water temperatures that were outside the two standard deviation range, and it was recommended that the thermometer be checked for accuracy. There were two very high temperatures (25<sup>o</sup> and 28.9<sup>o</sup> C) measured during the second quarter 2004, so there still may be problems with the thermometer; however, high temperatures are not unusual for this site, as can be seen on the chart.



At this time there is no further action recommended.